

### **AMENDMENTS TO THE DRAWINGS**

The attached "Replacement Sheet" of drawing includes changes to Figure 4.

The attached "Replacement Sheet," which includes Figure 4, replaces the original sheet including Figure 4.

## **REMARKS**

This amendment is responsive to the office action mailed June 24, 2005. Claims 8, 29-35 and 37 have been cancelled. Claims 1-7, 9-28, 36 and 38 remain pending in the application.

## **SPECIFICATION**

The specification stands objected to for certain informalities. Applicant(s) have amended the specification according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

## **CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

Claims 1-3, 5-7, 9-24 and 36 were rejected as being unpatentable over Burger et al (U.S. 6,353,418) in view of Holak et al (U.S. 5,175,555). This rejection is respectfully traversed.

Initially, the Examiner will note that the present invention relates to a waveguide for use with an antenna aperture. The waveguide includes a tubular waveguide component having a tapering inner surface, and a dielectric member having a generally conical profile, and being inserted at least substantially into the tubular waveguide component to be at least substantially housed therein. One of the dielectric member and the tapering inner surface comprises a surface that is non-linear. The dielectric also includes a base portion, newly labeled with reference numeral 118a in Figure 4, that fits within an opening 125 at one end of the tubular waveguide member. The claims have been amended to particularly recite this feature.

This feature is not shown or suggested by the references cited, either singly or in combination.

Burger et al discloses a dielectric insert 27 that has a step portion adjacent area 35 of the dielectric insert (see Figure 3). This step portion, if used with the waveguide of the present invention, would introduce discontinuities and reflections of the EM wave signal traveling through the waveguide towards the base portion 118a of the dielectric insert 118 shown in Figure 4 of the present application. Holak et al (U.S. 5,175,555) does not remedy this deficiency. Holak et al appears directed in part to a feedhorn (Figure 2), but does not suggest in any manner the desirability of including the shape of the interior wall of the waveguide in connection with the dielectric insert shown in Burger et al. Thus, there does not appear to be any motivation or desirability of combining the isolated feature of the waveguide shown in Holak et al with the teachings of Burger et al.

The examiner will note that each of the independent claims have been amended to more positively recite the feature of the base portion of the dielectric member having a diameter that is about equal to that of an opening of the waveguide into which the base portion is inserted. It is believed that the remaining independent claims clearly define over the Burger et al/Holak et al combination and reconsideration of this rejection is respectfully requested.

#### **REJECTION UNDER 35 U.S.C. § 102**

Claim 38 was rejected under 35 U.S.C. section 102b as being anticipated by Burger et al. In view of the claim amendments made to claim 38, which particularly

point out the fitting of the base portion of the dielectric insert in the opening in the tubular waveguide component, it is believed that this rejection has been rendered moot. Again, Burger et al does not show, teach or even suggest this structure. Furthermore, the structure in Burger et al would likely be plagued by reflection of the EM wave signal for those instances where the EM wave signal is traveling into the waveguide rather than outwardly from it. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

#### **OBJECTED TO CLAIMS**

Claims 8 and 37 were objected to, but otherwise indicated as being allowable provided the dimensions in table 1 are included in each of these claims. This is gratefully acknowledged, but in view of the amendments made to the independent claims and the remarks presented herein, it is believed that the independent claims are now clearly in form for allowance without further amendment.

#### **REJECTION OF CLAIM 4**

Claim 4 was rejected under 35 U.S.C. section 103a as being unpatentable over Burger et al in view of Chiron et al (U.S. 3,765,021). Claim 4 depends from independent claim 1. In view of the amendments to independent claim 1 and the remarks presented herein, it is believed that this rejection has been rendered moot. Reconsideration is therefore respectfully requested.

• **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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